

Amendment to the Claims:

Please amend the claims as follows.

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A biomolecular solder ~~having a predetermined shape and comprising a proteinaceous substance that has been at least partially denatured while moist following shaping to obtain the predetermined shape, made a method comprising (a) providing a proteinaceous substance in a solvent; (b) denaturing the proteinaceous substance while moist with the solvent such that at least a portion of the proteinaceous substance bonds together and, (c) shaping the proteinaceous substance, wherein the solder is shaped before, during or after the denaturing of step (b), or a combination thereof, and, when shaped, the final shape of the solder is [[thereby]] essentially maintained and the solubility of the proteinaceous substance is reduced in a physiological fluid at body temperature.~~

Claim 2 (currently amended): A solder according to claim 1 wherein the proteinaceous substance comprises a protein ~~or an analogue thereof~~.

Claim 3 (previously presented): A solder according to claim 2 wherein the protein is any one of an albumin, an elastin, a fibrinogen, or any combination thereof.

Claim 4 (currently amended) A solder according to claim 1, further comprising a dye ~~for improving energy deposition into the solder when the solder is exposed to energy~~.

Claim 5 (currently amended): A solder according to claim 4 wherein the dye ~~[[is]] comprises an indocyanine green, a methylene blue or [[fluorescent]] a fluorescein isothiocyanate.~~

Claim 6 (currently amended) A solder according to claim 1, further comprising an adjuvant ~~for promoting rapid or more complete tissue healing.~~

Claim 7 (previously presented) A solder according to claim 6 wherein the adjuvant is selected from the group consisting of a growth factor, a sodium hyaluronate, a hormone and an anti-coagulant.

Claim 8 (previously presented) A solder according to claim 1 further comprising a material for improving the strength of the solder.

Claim 9 (currently amended): A solder according to claim 8 wherein the material [[is]] comprises a polytetrafluoroethylene fibre or a ceramic fibre.

Claim 10 (previously presented): A kit comprising a solder according to any one of claims 1 to 9.

Claim 11 (currently amended): A method of preparing a biomolecular solder, the method comprising:

- (a) forming a biomolecular solder comprising a proteinaceous substance and a solvent;
- (b) shaping the solder into a [[predetermined]] desired shape, wherein the solder is shaped before, during or after the denaturing of step (c), or a combination thereof; and
- (c) at least partially denaturing the proteinaceous substance while the solder is moist such that at least a portion of the proteinaceous substance bonds together and the [[predetermined]] desired shape of the solder is [[thereby]] essentially maintained and the solubility of the proteinaceous substance is reduced in a physiological fluid at body temperature.

Claim 12 (previously presented): A method according to claim 11 wherein the proteinaceous substance is denatured by exposing the solder to energy for a time period that is sufficient to allow the energy to at least partially denature the proteinaceous substance.

Claim 13 (previously presented): A method according to claim 12 wherein the energy is thermal energy.

Claim 14 (previously presented): A method according to claim 11 wherein the proteinaceous substance is denatured by heating the solder at a temperature of greater than 40°C for a time period of about 30 seconds or longer.

Claim 15 (previously presented): A method according to claim 14 or 32 wherein the solder is heated in a hot liquid bath or in pressurized steam.

Claim 16 (previously presented): A method according to claim 11 wherein the proteinaceous substance is denatured by exposing the solder to a denaturing agent for a time period that is sufficient to allow the denaturing agent to denature the proteinaceous substance.

Claims 17 to 18 (canceled)

Claim 19 (previously presented): A method according to claim 11 wherein a dye for improving energy deposition into the solder is added to the solder in step (a).

Claim 20 (previously presented): A method according to claim 19 wherein the dye is added to the solder in an amount between 0.1 to 2.5% w/w of the solder.

Claim 21 (previously presented): A method according to claim 20 wherein the dye is mixed with the solvent, prior to mixing the solvent with the proteinaceous substance.

Claim 22 (previously presented): A method according to claim 11 wherein a majority of the solvent is removed from the solder during the drying of the solder.

Claim 23 (canceled)

Claim 24 (previously presented): A method according to claim 11 wherein the solder is applied to a support structure before the proteinaceous substance is denatured.

Claim 25 (previously presented): A method according to claim 24 wherein the support structure is a mesh, a stiffener or a graft material.

Claim 26 (previously presented): A method according to claim 11 further comprising the step of sterilizing the solder following the denaturing of the proteinaceous substance.

Claim 27 (currently amended): A method of welding biological tissue together [[to effect a repair]], the method comprising:

- (a) applying a solder according to claim 1 to the biological tissue to be welded together; and
- (b) exposing the solder to an energy for a time sufficient to cause the solder to weld the biological tissue together.

Claim 28 (previously presented): A method according to claim 27 wherein the solder is moistened before application to the biological tissue.

Claim 29 (previously presented): A solder according to claim 1 wherein the proteinaceous substance is essentially insoluble in the physiological fluid at body temperature.

Claim 30 (previously presented): A solder according to claim 1 wherein the solder has been shaped from a composition comprising the proteinaceous substance in an amount of at least 40% w/w of the composition.

Claim 31 (previously presented): A solder according to claim 1 wherein the proteinaceous substance comprises at least one substance selected from the group consisting of a protein, a polypeptide, and analogues thereof.

Claim 32 (previously presented): A method according to claim 11 further comprising drying the solder following the denaturation of the proteinaceous substance.

Claim 33 (previously presented): A method according to claim 11 wherein the solder, shaped into the predetermined shape, comprises the proteinaceous substance in an amount of at least 40% w/w or greater of the solder.

Claim 34 (previously presented): A method according to claim 11, wherein the solder comprises a proteinaceous substance in an amount in the range from 50% w/w to 80% w/w of the solder.

Claim 35 (previously presented): A method according to claim 33 or 34 wherein the solder comprises a solvent in an amount up to 60% w/w of the solder.

Claim 36 (previously presented): A method according to claim 14 wherein the solder is heated at a temperature in a range from 75°C to 100°C.

Claim 37 (previously presented): A method according to claim 36 wherein the solder is heated at a temperature in a range from 100°C to 150°C.

Claim 38 (previously presented): A method according to claim 16 wherein the denaturing agent comprises a chemical.

Claim 39 (previously presented): A method according to any one of claims 11, 32, or 33 wherein the proteinaceous substance comprises at least one substance selected from the group consisting of a protein, a polypeptide, and analogues thereof.

Claim 40 (previously presented): A method according to claim 39 wherein the proteinaceous substance comprises at least one substance selected from the group consisting of a protein and a polypeptide.

Claim 41 (currently amended): A method according to claim 40 wherein the proteinaceous substance comprises at least one protein selected from the group consisting of an albumin, an elastin, and a [[fribrogen]] fibrinogen.

Claim 42 (previously presented): A method according to claim 28 wherein the moistening of the solder increases flexibility of the solder.

Claim 43 (new): The biomolecular solder of claim 1, wherein the solvent comprises an aqueous solvent.

Claim 44 (new): The biomolecular solder of claim 43, wherein the aqueous solvent comprises water or saline.

Claim 45 (new): The method of claim 11, wherein the solvent comprises an aqueous solvent.

Claim 46 (new): The method of claim 45, wherein the aqueous solvent comprises water or saline.

Claim 47 (new): The method of claim 11, wherein the proteinaceous substance is denatured by exposing the solder to a laser energy.

Claim 48 (new): The method of claim 47, wherein the laser is a diode laser.

Claim 49 (new): The method of claim 27, wherein the biological tissue is welded together to effect a repair.

Claim 50 (new): The biomolecular solder of claim 1, wherein all of the proteinaceous substance is denatured.

Claim 51 (new): The biomolecular solder of claim 1, wherein a portion of the proteinaceous substance is denatured.

Claim 52 (new): The method of claim 11, wherein all of the proteinaceous substance is denatured.

Claim 53 (new): The method of claim 11, wherein a portion of the proteinaceous substance is denatured.

Claim 54 (new): The biomolecular solder of claim 1, wherein the method of making the solder further comprises sterilizing the biomolecular solder.

Claim 55 (new): The biomolecular solder of claim 1, wherein the proteinaceous substance is shaped into a sheet, a tube, a partial tube or a rod.

Claim 56 (new): The method of claim 11, the desired shape comprises a sheet, a tube, a partial tube or a rod.